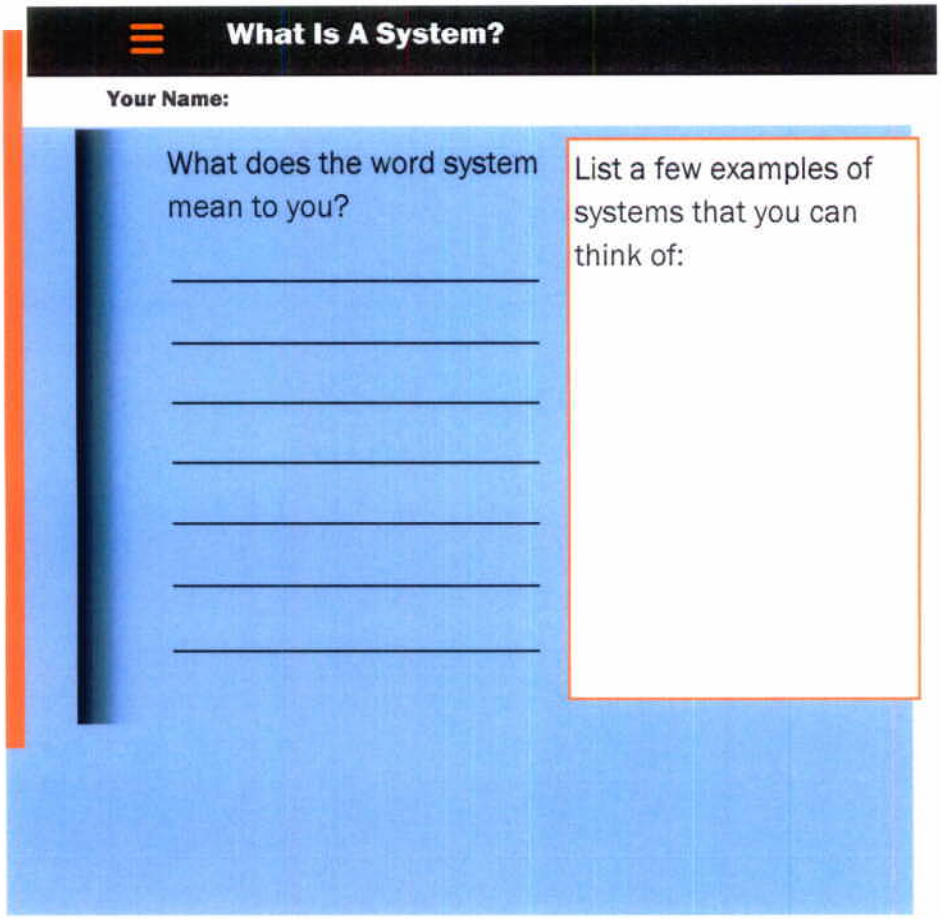
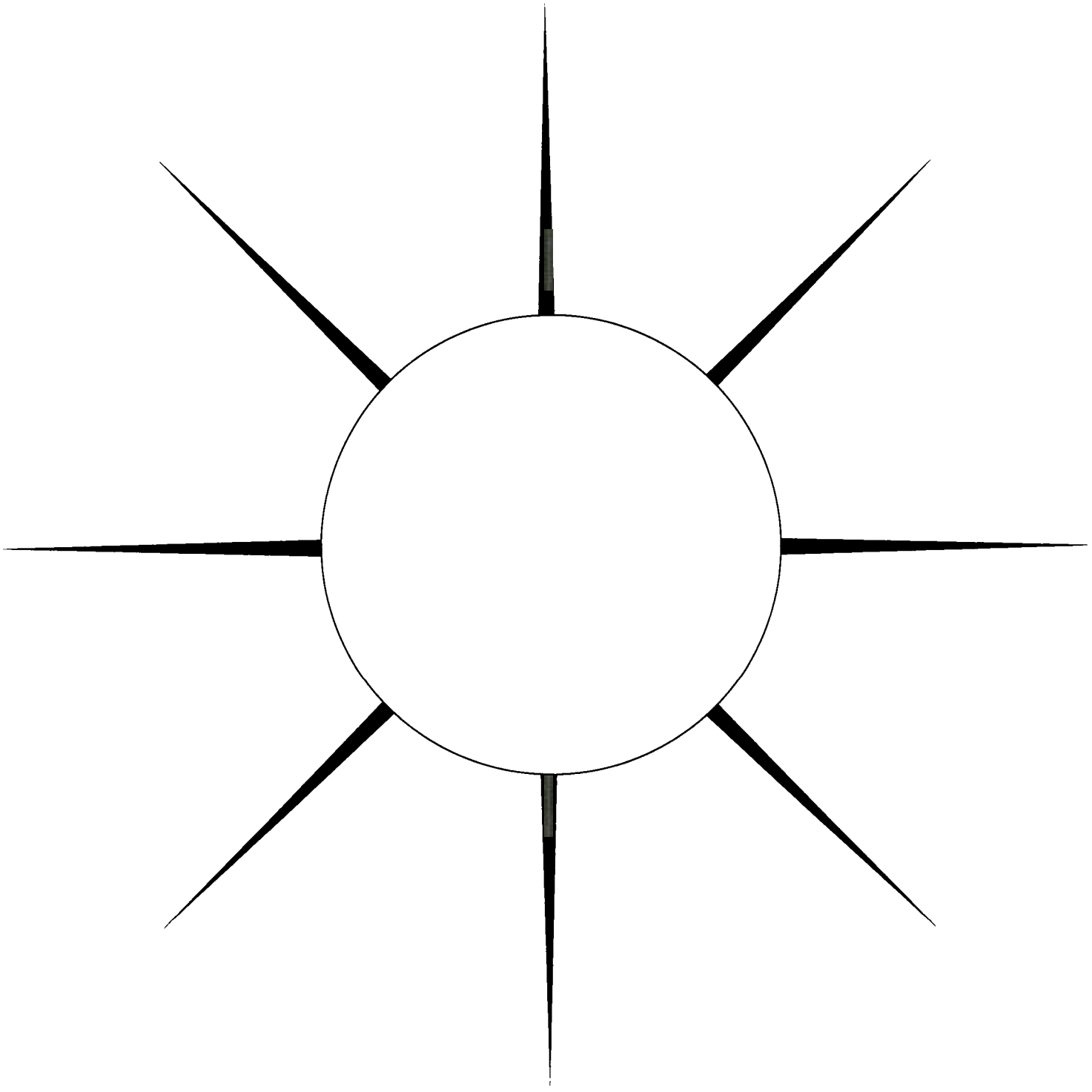
#1 Activity Sheet



Activity #2

What Is My Role In The School?



Roles In School

Student			
Teacher			
Principal			
Secretary			
Nurse			
Custodian			
Cafeteria Workers			

Changing The Roles

CHALLENGES	Changes in Roles to Respond To
Challenge 1	50% of all students left the district and went to a new school:
Challenge 2	The principal quit and no one was hired to replace the principal:
Challenge 3	The cafeteria workers are on strike and will not go back to work until they see better health benefits:
Challenge 4	It is the beginning of a new school year and the Nurse's primary distributor of supplies went out of business over the summer and will not be able to deliver the necessary supplies:
Challenge 5	The secretary was asked to send an emergency memo to the staff informing of an early dismissal due to accumulating snow. The computer downloaded a virus and cannot send the e-mail:
Challenge 6	The night before someone vandalized the outside of the school building. The custodians being responsible for the inside of the school cleaned up the graffiti. The regular custodial chores were not completed during the day:
Challenge 7	A prankster in the school went around to various classrooms and took all the chalk. The teachers now have nothing to write with on the chalkboards:

Activity Sheet #3

SYSTEMS: _____

examples

GOAL: _____

NATURAL SYSTEMS: _____

examples

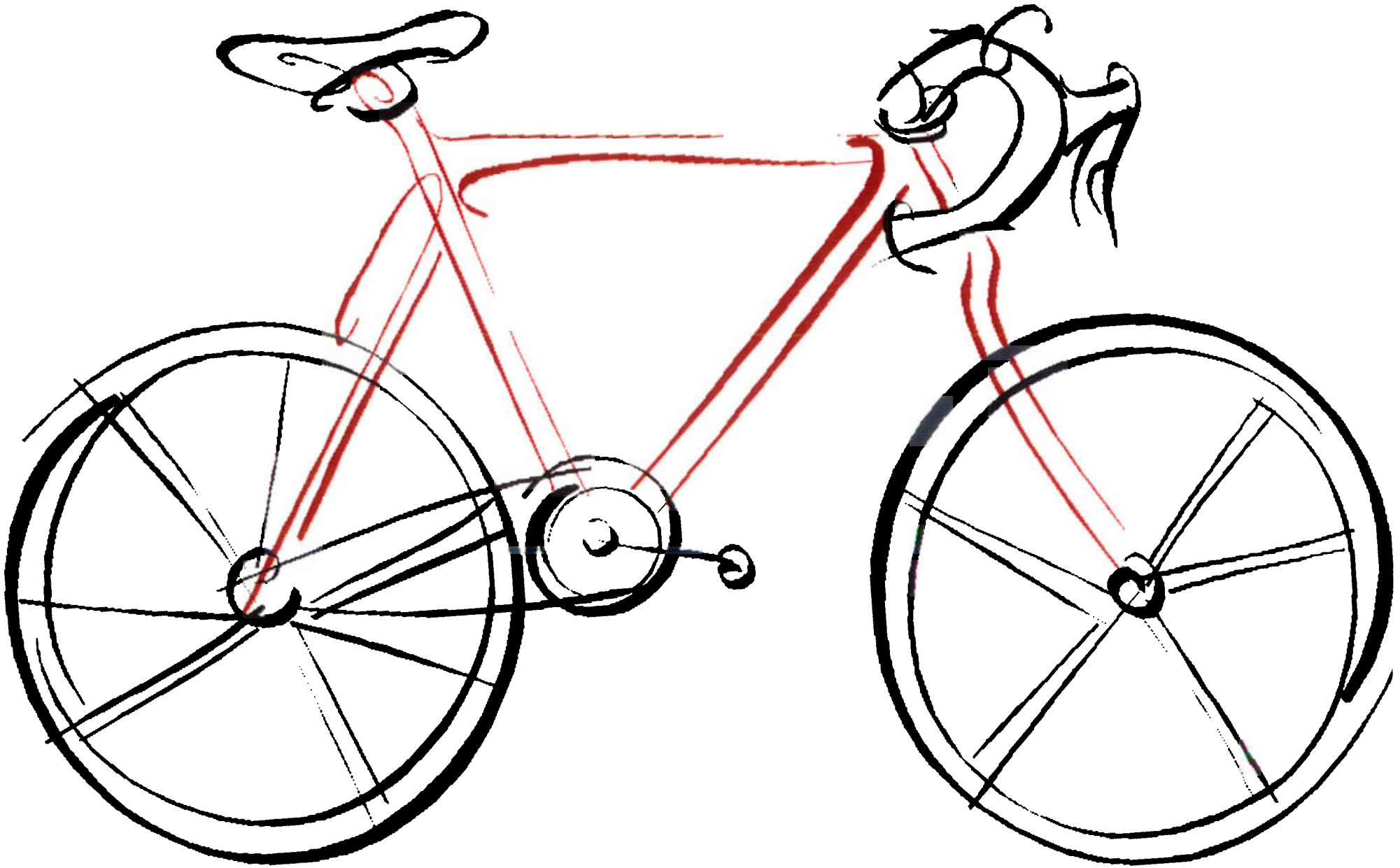
TECHNOLOGICAL SYSTEMS: _____

examples

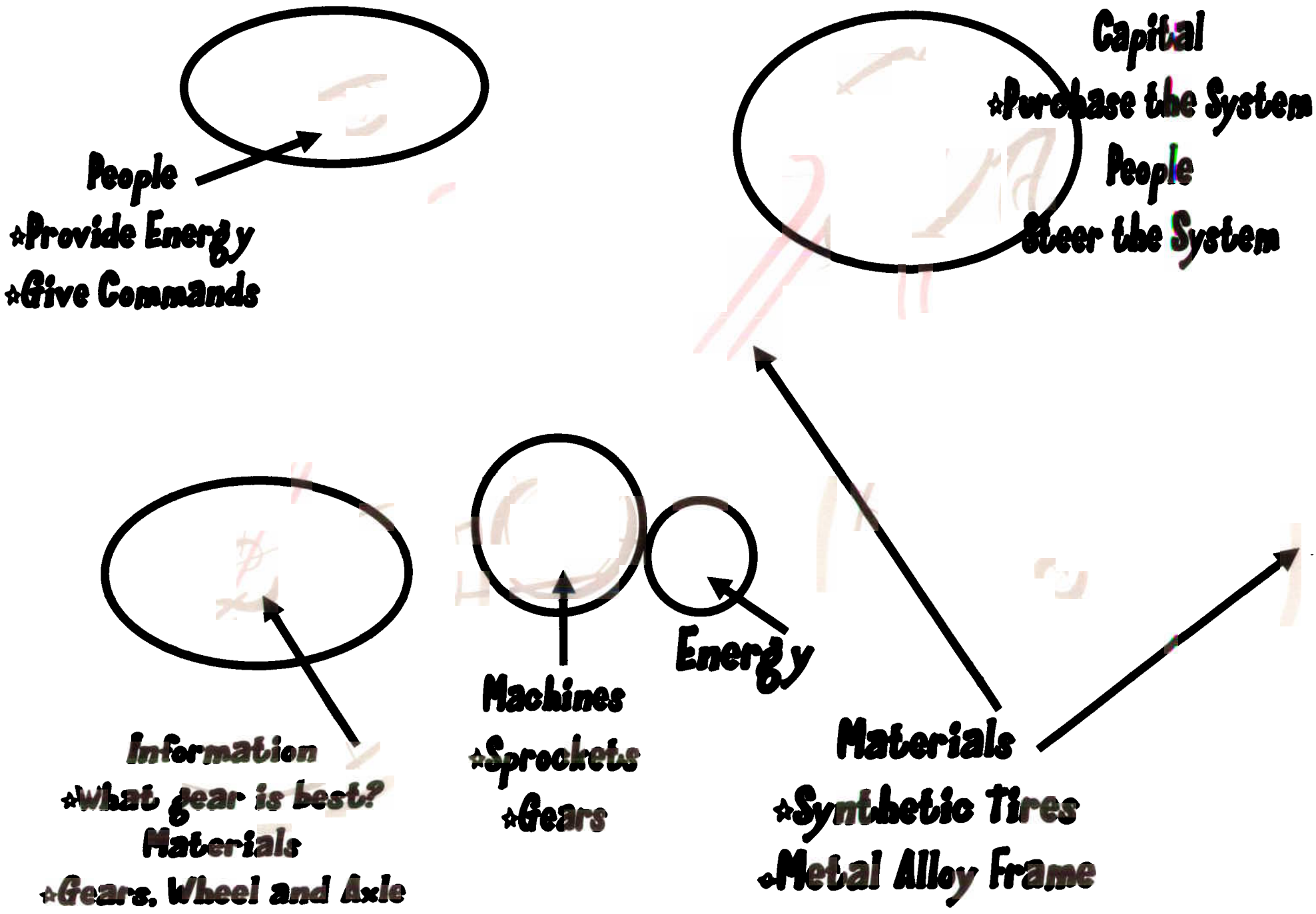
SUB-SYSTEMS: _____

examples

How Does This System Work?



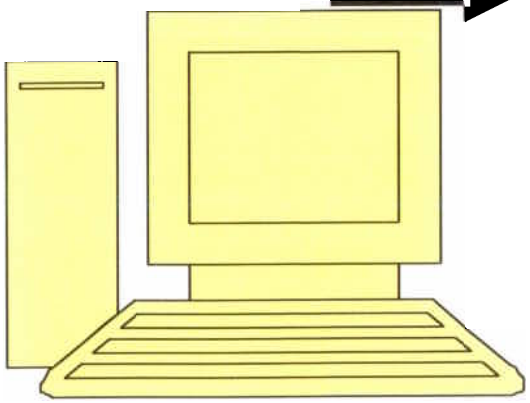
How Does This System Work?

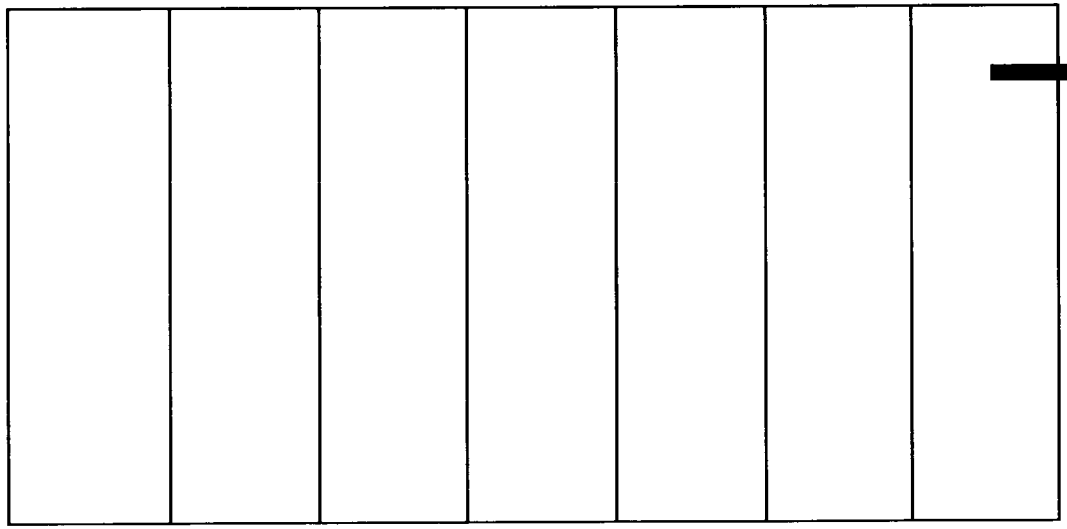


Diagramming Systems

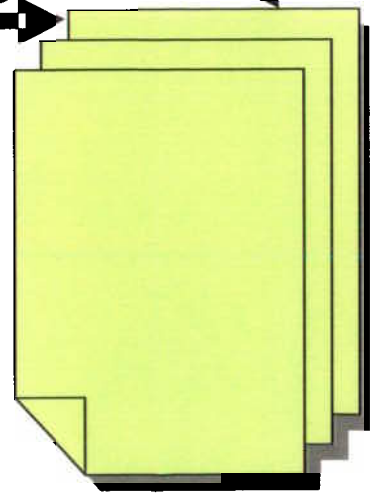
People
Tools
Information
Materials
Energy
Capital
Time

Input





Output



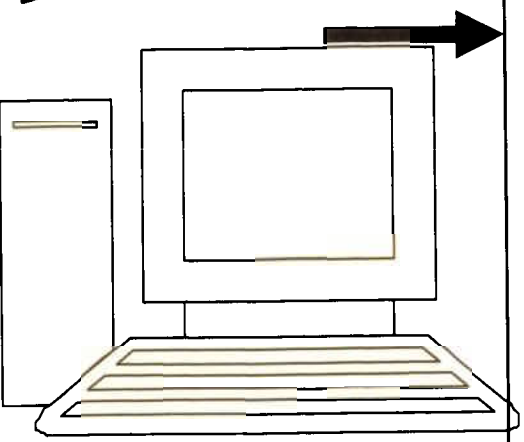
Type a letter to your teacher with new software

Print and hand in letter

Diagramming Systems

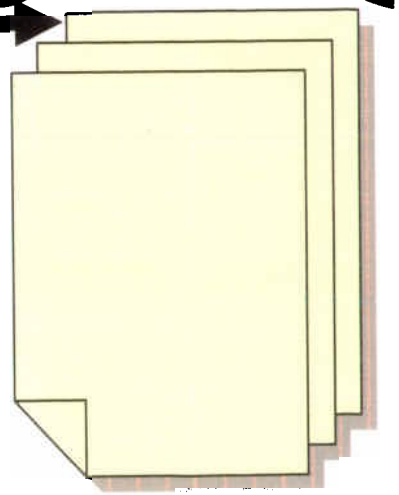
People	Tools	Information	Materials	Energy	Capital	Time
Provide energy to type letter into computer	Computer, printer, motherboard	Selecting program to type a letter in	Keyboard, cpu, monitor, printer, paper	Mechanical and electrical energy	Purchase computer, software, etc...	How quickly the letter can be written

Input



Type a letter to your teacher with new software

Output



Print and hand in letter

People

Energy

Materials

PRODUCTION

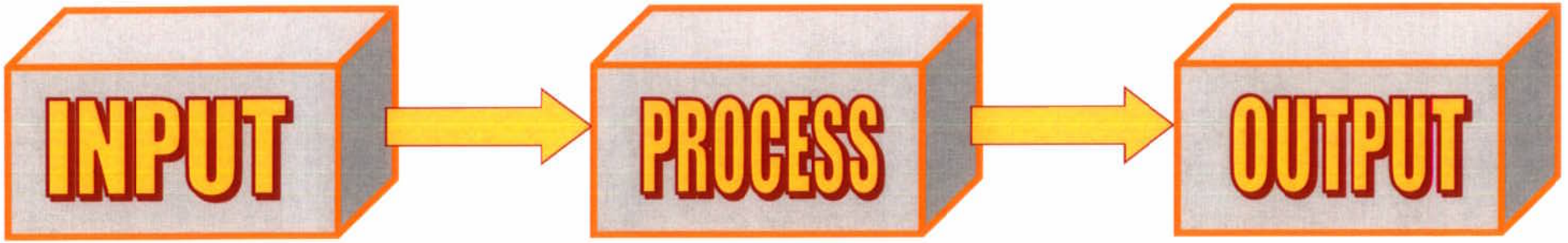
Time

Capital

Information

Tools

The Universal Systems Model



Resources put into the system

Combines Resources

People
Energy
Time
Tools
Information
Capital
Materials

What comes from the system

Education
Veggies
Shoes

Diagramming Systems

People

Tools

Information

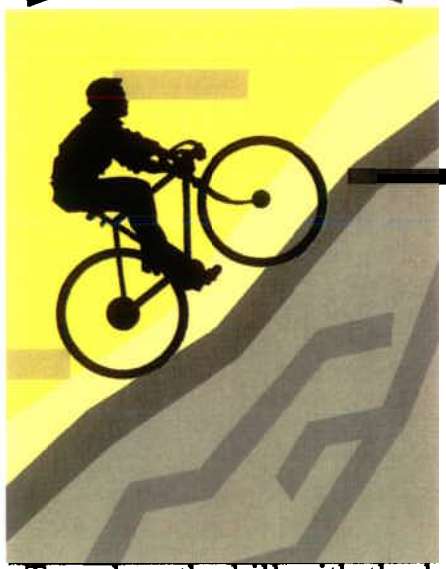
Materials

Energy

Capital

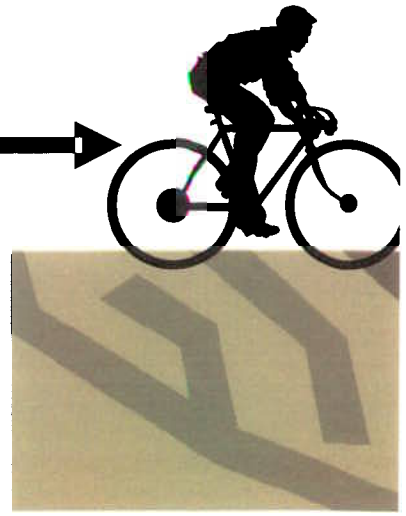
Time

Input



Travel up the hill with the least amount of resistance and least amount of energy exerted

Output



Rider reaches hilltop with least amount of energy exerted

FEEDBACK

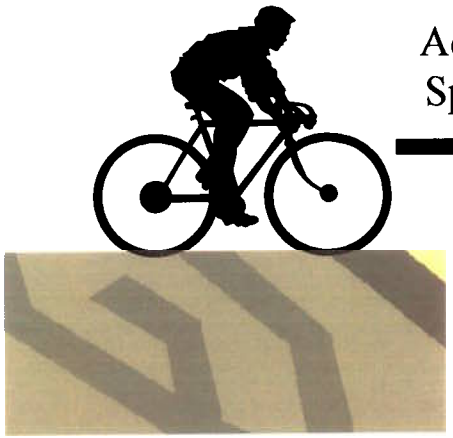
Input

People
Tools
Information
Materials
Energy
Capital
Time

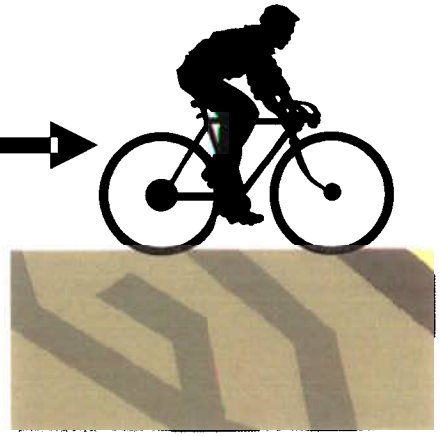
Output

Adjust Speed

PROCESS



Travel at 15 miles per hour



Rider is traveling at 20 miles per hour

[redacted]

(MONITOR)

True or False:

Technological Systems, when complete, do not need to be monitored by humans. _____

Definition of Feedback: _____

TRANSPORTATION SYSTEM

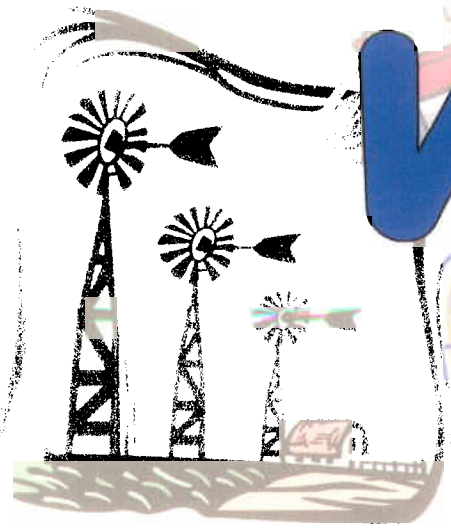
Land

Air

Water

The transportation system can be broken down intoland, air and water. What subsystems exist in each of the three branches? List and draw/sketch an image for each.

SYSTEMS IN THE DESIGNED WORLD



Systems to Choose From

MEDICAL	Needles	Stethoscope	Blood Pressure Measurer
	Scale and Height Measurer	911 Dispatcher	Intensive Care Unit

AGRICULTURAL	Irrigation System	Tractors/Plows	Mechanical Reaper
	Planters	Combines	Cultivators

ENERGY AND POWER	Power lines	Power Plants	Light bulbs
	Thermostat	Engine	Air Conditioner

COMMUNICATION	Telephone/Cell Phone	Fax Machine	Computer
	Mail (US Postal Service)	Internet	Morse Code

TRANSPORTATION	Automobile	Airplanes	Ships/Boats
	Trains	Rollerblades/Skates	Skateboards
	Scooters	ATV (All Terrain Vehicle)	Hot Air Balloon

MANUFACTURING	Assembly Line	Robots	Logging
	Cotton Gin	Printing Press	Coal Mining

CONSTRUCTION	Cranes	Dump Trucks	Cement Truck
	Jackhammers	Drills	Circular Saws

TOP 3 CHOICES:	1.	2.	3.

How Does This System Work?

History of System

What system are you researching: _____

How did the system first come about? _____

_____

_____

_____

Did someone set out to make it or did an accident of sorts inspire the system? _____

_____

_____

_____

Through what stages did the system develop? (What was it like when it began? Does it still exist today, if so how has it changed? If not, what was it like before it went defunct?) _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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_____

_____

_____

_____

History of System

What caused changes in the system over time?_____

How did the system in question change the way people behave? _____

What is the economic impact of the system? _____

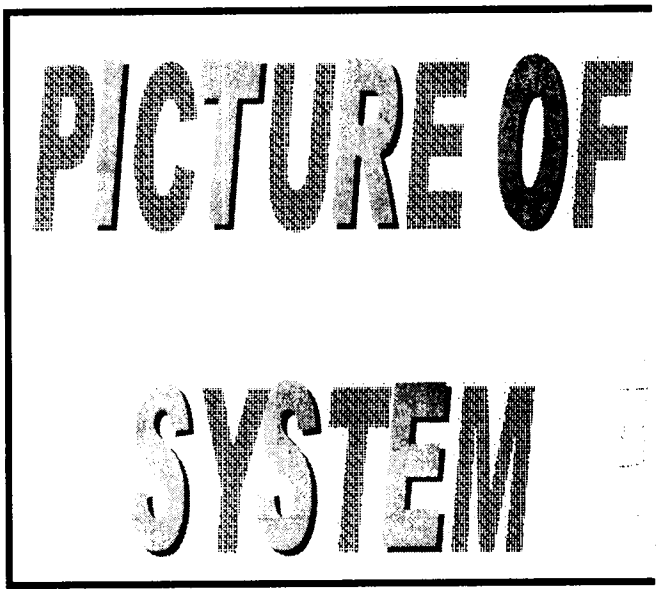
The System's Times

Date | Volume XCV, NO. 44 | Price:

MAIN HEADING

SUB HEADING

article



article continued

IN THIS WEEK'S NEWS

Final Project Selection

Poster: Create a poster depicting the advances in your system over time. A timeline complete with pictures, names, and headlines would be appropriate for this poster. You should include the following additional items:

- Inventor of the system;
- Changes in system over time;
- Economic impact system had on the society;
- Explaination of how the system works today (large picture/sketch with labels); and
- How you think the system will change in the future?

Presentation: Using presentation software, create a 10-15 slide presentation that discusses the system, its components, the advances through history, and the economic impact of the system. Sample outline:

- Title and Table of Contents;
- Description of System,
- Description of System Components (subsystems);
- The inventor and the inspiration for the system;
- 3—4 slides on the history of the system through the years to present day;
- Explain how the system has changed and the economic impact it had/has on society; and
- Predict and justify how the system in the future may change.

Research Paper: Using word processing software create a research paper five to ten pages in length describing the system. Include in your research paper, the following information:

- Description of system;
- Description of system components (subsystems);
- The inventor and the inspiration for the system;
- The history of the system through years to present day;
- Explanation as to why the system changed;

- The economic impact the system has on society; and
- Your Opinion: Do you foresee the system changing in the future, why or why not?

Dear _____;

Today in _____ I learned about _____

Sincerely,

_____
(your name)

Dear _____;

Today in _____ I learned about _____

Sincerely,

_____
(your name)

Dear _____;

Today in _____ I learned about _____

Sincerely,

_____
(your name)

Dear _____;

Today in _____ I learned about _____

Sincerely,

_____
(your name)